

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P392556

Luminaire Tested: **MWL-3-00-47-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392556  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-00-47-UNV-L930-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4034.4 lumens  
Efficiency: N/A  
Efficacy: 73.2 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

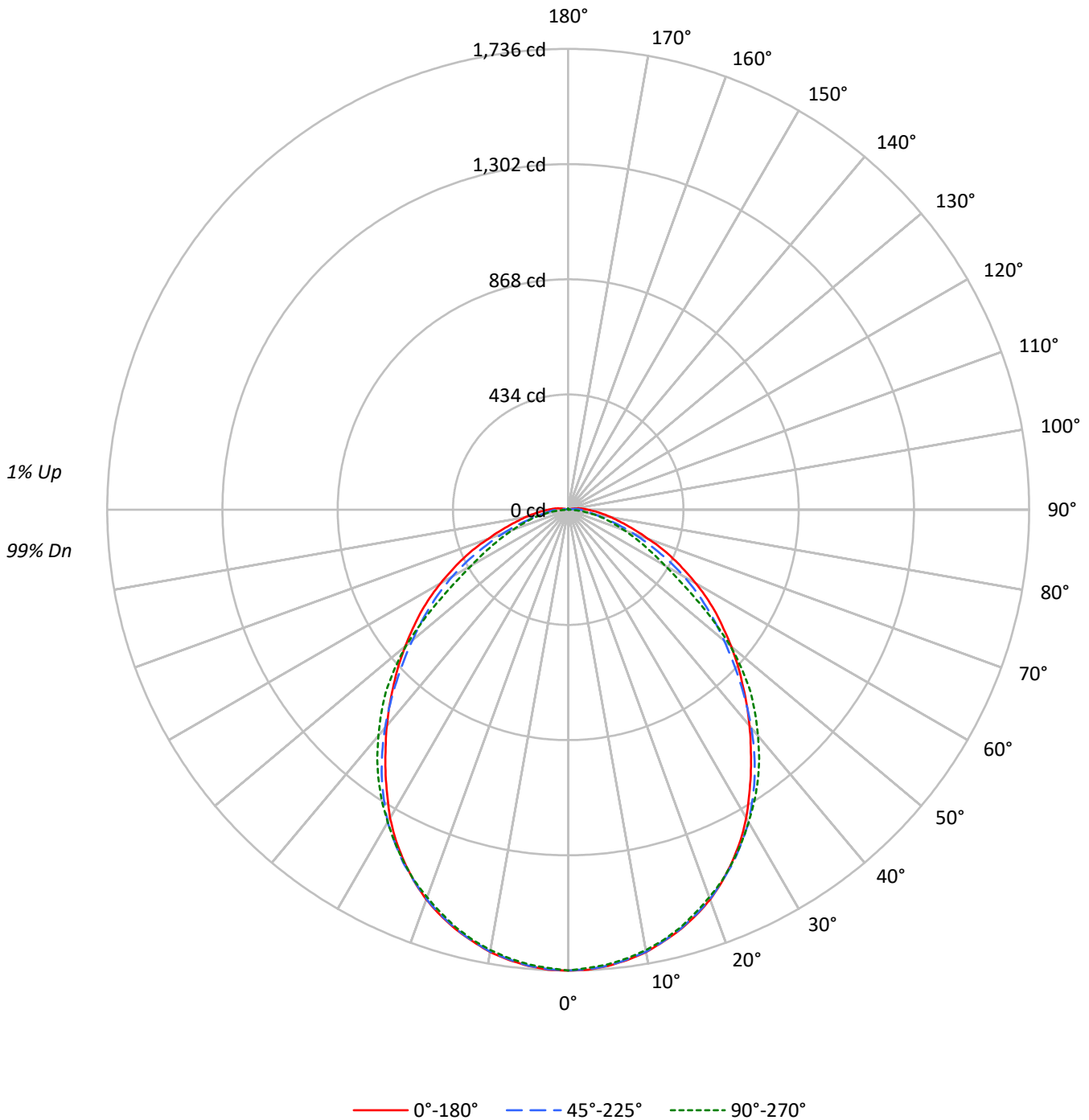
Input Watts (W): 55.146  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101	99
1	109	105	101	97	106	102	99	96	98	95	92	94	92	89	90	88	86	84
2	100	92	86	81	97	91	85	80	87	82	78	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	68	77	71	66	74	69	65	72	67	64	62
4	85	73	65	59	82	72	64	58	69	63	57	67	61	56	65	60	56	53
5	78	66	57	51	76	65	57	51	63	56	50	61	54	50	59	53	49	47
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	53	48	43	41
7	67	54	46	40	66	54	46	40	52	45	40	50	44	39	49	43	39	37
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33
9	59	46	38	33	57	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	27

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14950	14950	14950
5°	14733	13924	13665
10°	14442	12944	12522
15°	14065	11986	11458
20°	13632	11063	10438
25°	13048	10141	9492
30°	12348	9225	8567
35°	11491	8233	7698
40°	10697	7200	6794
45°	9923	6163	5914
50°	9210	5235	4867
55°	8514	4414	3632
60°	7698	3629	2659
65°	6834	2791	2010
70°	5822	2041	1487
75°	5018	1369	1076
80°	4571	896	679
85°	4322	663	282



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.4	4.1
10°-20°	460.2	11.4
20°-30°	674.2	16.7
30°-40°	763.8	18.9
40°-50°	718.1	17.8
50°-60°	569.8	14.1
60°-70°	370.6	9.2
70°-80°	187.9	4.7
80°-90°	79.1	2.0
90°-100°	29.7	0.7
100°-110°	5.4	0.1
110°-120°	2.4	0.1
120°-130°	2.5	0.1
130°-140°	2.4	0.1
140°-150°	2.0	0.1
150°-160°	1.5	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	1297.8	32.2
0°-40°	2061.6	51.1
0°-60°	3349.6	83.0
0°-90°	3987.2	98.8
90°-120°	37.5	0.9
90°-150°	44.5	1.1
90°-180°	47.0	1.2
0°-180°	4034.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1736	1736	1736	1736	1736	
5°	1725	1726	1724	1721	1719	164
15°	1636	1636	1635	1632	1630	461
25°	1462	1464	1468	1468	1465	672
35°	1199	1205	1225	1243	1245	750
45°	928	915	914	946	971	718
55°	680	665	632	618	588	606
65°	435	423	374	314	310	432
75°	229	197	165	140	153	247
85°	113	91	68	45	36	103
90°	74	68	47	24	1	41
95°	50	47	29	3	1	37
105°	9	6	3	2	2	13
115°	3	3	3	2	2	3
125°	3	3	3	3	3	3
135°	3	3	3	3	3	3
145°	3	3	3	3	3	2
155°	3	3	3	3	3	2
165°	3	3	3	3	3	1
175°	2	3	3	3	3	0
180°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1736.1	1736.1	1736.1	1736.1	1736.1
2.5°	1734.4	1735.3	1732.7	1729.3	1727.6
5°	1725.1	1726.0	1724.3	1720.8	1719.2
7.5°	1710.7	1712.5	1708.3	1706.5	1704.0
10°	1692.1	1693.0	1690.5	1686.2	1684.6
12.5°	1665.1	1666.0	1664.2	1660.9	1660.0
15°	1636.4	1635.5	1634.6	1632.2	1629.6
17.5°	1601.7	1601.7	1599.2	1597.5	1592.4
20°	1562.8	1561.1	1561.1	1557.8	1553.6
22.5°	1515.5	1515.5	1514.6	1514.6	1513.0
25°	1462.2	1463.9	1468.1	1468.1	1464.8
27.5°	1404.7	1407.3	1414.1	1418.3	1413.2
30°	1341.4	1345.6	1359.1	1365.0	1359.1
32.5°	1269.5	1276.3	1292.4	1305.1	1304.2
35°	1199.4	1205.3	1224.8	1243.4	1245.0
37.5°	1129.2	1130.0	1150.4	1175.7	1181.6
40°	1062.5	1059.9	1073.4	1103.9	1111.5
42.5°	994.9	985.5	992.3	1028.7	1042.2
45°	928.0	915.4	913.7	945.8	971.2
47.5°	865.5	849.4	837.6	862.1	886.7
50°	801.3	783.6	765.8	781.0	796.2
52.5°	737.9	723.5	698.1	697.4	692.2
55°	679.6	665.2	632.2	617.8	587.5
57.5°	617.8	606.8	568.8	532.5	494.5
60°	554.5	548.6	504.6	447.1	421.8
62.5°	493.6	488.5	438.7	376.9	361.8
65°	435.3	423.4	373.6	314.4	310.2
67.5°	379.5	364.3	312.8	263.7	263.7
70°	319.5	300.9	260.4	218.1	221.4
72.5°	273.0	242.6	211.3	176.6	184.3
75°	229.0	197.0	164.8	140.4	153.0
77.5°	191.9	158.9	126.8	109.9	122.6
80°	164.8	131.9	100.6	82.0	91.3
82.5°	136.9	109.9	82.0	59.2	65.1
85°	113.2	91.3	68.5	44.8	35.5
87.5°	90.4	78.6	56.6	34.7	11.0
90°	74.4	67.6	47.4	24.5	0.9
92.5°	61.7	57.5	38.9	14.4	0.9
95°	49.8	47.4	28.7	3.3	0.9
97.5°	40.6	38.0	16.0	1.7	0.9
100°	27.9	23.7	6.8	1.7	0.9
102.5°	16.9	12.7	2.6	1.7	0.9
105°	9.3	5.9	2.6	1.7	1.7
107.5°	5.1	3.3	2.6	1.7	1.7
110°	4.2	3.3	2.6	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.3	2.6	2.6	1.7	1.7
115°	3.3	2.6	2.6	1.7	1.7
117.5°	3.3	2.6	2.6	1.7	1.7
120°	3.3	3.3	2.6	1.7	1.7
122.5°	3.3	3.3	2.6	2.6	2.6
125°	3.3	3.3	2.6	2.6	2.6
127.5°	3.3	3.3	2.6	2.6	2.6
130°	3.3	3.3	3.3	2.6	2.6
132.5°	3.3	3.3	3.3	2.6	2.6
135°	3.3	3.3	3.3	2.6	2.6
137.5°	3.3	3.3	3.3	3.3	2.6
140°	3.3	3.3	3.3	3.3	2.6
142.5°	3.3	3.3	3.3	3.3	2.6
145°	3.3	3.3	3.3	3.3	2.6
147.5°	3.3	3.3	3.3	3.3	2.6
150°	3.3	3.3	3.3	3.3	2.6
152.5°	3.3	3.3	3.3	3.3	2.6
155°	3.3	3.3	3.3	3.3	2.6
157.5°	3.3	3.3	3.3	2.6	2.6
160°	3.3	3.3	3.3	3.3	2.6
162.5°	3.3	3.3	3.3	3.3	3.3
165°	3.3	3.3	3.3	3.3	3.3
167.5°	3.3	3.3	3.3	3.3	3.3
170°	2.6	2.6	3.3	3.3	3.3
172.5°	1.7	2.6	3.3	3.3	3.3
175°	1.7	2.6	3.3	3.3	3.3
177.5°	1.7	2.6	3.3	3.3	3.3
180°	3.3	3.3	3.3	3.3	3.3

(END OF REPORT)